REMARKS

The Examiner rejected the claims under sections 112 and 102/103. In the amendments above, we have addressed the section 112 arguments in self-explanatory ways. These section 112 amendments are not intended nor do they constitute any narrowing of the claims as compared to those originally filed. In the following remarks, we traverse the art rejections.

As to claim 1, the examiner states that a control of monomer flow rate during portions of the polymerization reaction, purportedly as disclosed in Sugimora (but nowhere actually mentioned), constitutes a control of the amount of in-process monomer present throughout that reaction as now claimed. While the monomer addition rate is a factor contributing to the rate of polymerization, and therefore a contributor to the level of in-process monomer present in the reactor, it is not the sole factor influencing the level of in-process monomer. The in-process monomer is the result of a balance between monomer addition rate and the rate of polymerization. While the monomer addition rate can be controlled to some extent by mechanical means, the polymerization rate is a function of many process variables. It is well documented that the rate of polymerization is affected by factors such as reaction temperature, catalyst concentration, monomer concentration, and the concentration of inhibitory compounds, to name a few. If all such process variables could be controlled perfectly in all instances of a given polymerization process one could reasonable predict the in-process monomer level, for any given instance of that process, based on monomer addition rate. However, perfect control of these many variables is not possible in practice and inconsistencies in any of the aforementioned process variables can result in unpredicted or uncontrolled effects on the rate of polymerization in an emulsion polymerization process. As such, in the absence of timely feedback as to the in-process monomer level it would be impossible to accurately and reproducibly control the in-process monomer levels through the control of monomer addition rate throughout the polymerization reaction as recited in claim 1 as amended..

As for claims 7 and 10, Sugimora does not teach a means of addressing the spike in Q_{jss} and Q_{jdyn} (*raw*) related to the presence of cooling medium in the reactor jacket at the beginning of the polymerization. Sugimora therefore does not enable true control of the in-process monomer present in the reactor. The current application claims and

teaches a means of improving the ability to accurately calculate the in-process monomer during this early portion of the polymerization thus improving the ability to control the in-process monomer within desired ranges. Claims 7 and 10 includes the steps of (or means for), among other things:

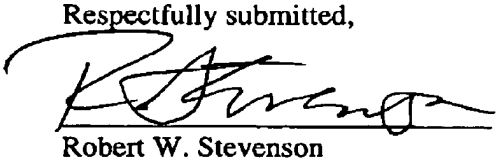
> calculating Q_{jdyn} *(raw)* and U_{raw} wherein U_{raw} is capped such that $U_{min} < U_{raw} < U_{max}$; and obtaining U_{filt} by inputting U_{raw} into a low pass first order filter; f) calculating, using the values obtained in steps a through e, a value for the dynamic jacket heat removal; g) calculating a heat release value of polymerization using the dynamic jacket heat removal value; h) comparing the calculated heat release value of polymerization to a target heat release value of polymerization;

These matters are not disclosed or addressed by Sugimora. The advantages of employing these steps (nowhere inherently or expressly disclosed in Sugimora) are discussed at length in our patent application (see, e.g., specification pp. 13-17). As such, the subject matters of Claims 7 and 10 are a distinct advancement over the teachings of Sugimora.

The remaining claims are dependent, and we believe they are patentable for, among other reasons, their dependency on allowable independent claims.

The art rejections based on Sugimori should be withdrawn.

Respectfully submitted,



Robert W. Stevenson
Attorney for Applicants
Registration No. 31,064
Telephone No.: 215-592-2171

Rohm and Haas Company
100 Independence Mall West
Philadelphia, PA 19106-2399